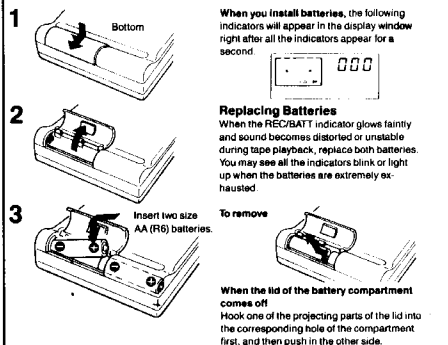


Installing Batteries



Features

- Auto-reverse function allows you to record or play back both sides of a cassette continuously without turning the cassette over.
- A large display window allows you to read indicators easily.
- Cue marker function to mark a desired portion during recording.
- VOR function allows you to record only when sound is picked up.
- Adjustable tape speed in playback mode.
- Equipped with a microphone sensitivity switch to adjust the recording level depending on the microphone you are using and the recording condition.
- Safety HOLD switch to prevent the function buttons (REC, PLAY, FF/CUE, PAUSE, REW/REVIEW, STOP, DHF) from being activated by mistake.

SONY

Cassette recorder

TCM-77V

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Owner's Record

The model number is located on the bottom and the serial number is located in the battery compartment. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. TCM-77V Serial No. _____

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

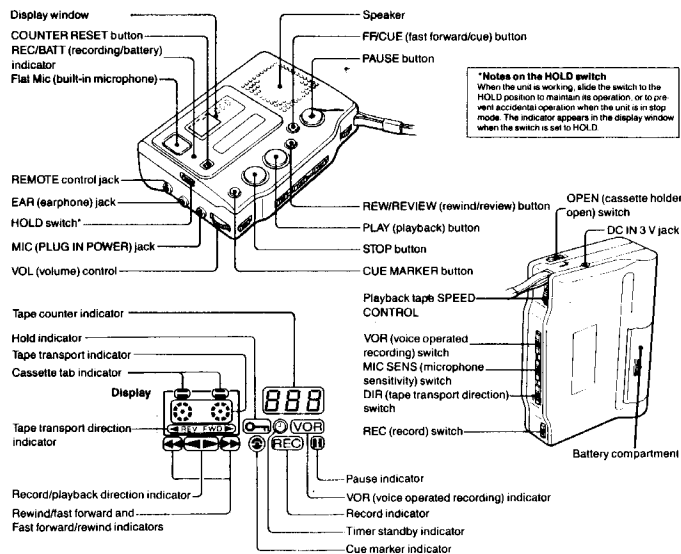
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna.
 - Relocate the equipment with respect to the receiver.
 - Move the equipment away from the receiver.
 - Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.
- If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

Parts Identification



SONY

AUDIO CAS RECORDER
COMPACT CAS COMPACT PLAYER
ELECTRONIC STILL VIDEO CAMERA
AND VIDEO ADAPTOR

LIMITED WARRANTY

SONY CORPORATION OF AMERICA ("SONY") warrants the product against defects in material and workmanship as follows:

1. For a period of 90 days from the date of purchase, SONY will pay the labor charge of your authorized service facility in repair of defective product, after the 90-day period, you must pay for all other charges.

2. In addition, SONY will supply a chargeable or non-chargeable replacement product for a period of 1 year from the original date of purchase.

Labor and Parts

In other warranty periods during the entire 90-day period, you must take the product to either the product repairer or a SONY authorized service facility.

Parts Only

During the remainder of the warranty period, any defective part will be replaced if it is shown to be defective in a SONY authorized service facility or SONY service center or your supplier.

This warranty does not cover accidents, damage, and damage due to acts of God, including, but not limited to, fire, theft, flood, lightning, and other causes of damage to the product. This warranty is void only in the United States of America.

Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the unit is the warranty period will be presented to obtain warranty service.

This warranty is valid only if the serial number appears on the product.

REPAIR OR REPLACEMENT PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. SONY WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT EXCEPT TO THE EXTENT PROVIDED BY APPLICABLE LAW. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN EXTENT TO THE EXTENT OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages or the exclusion of implied warranties. Therefore, the above limitations may not apply to you. In addition, if you enter into a service contract with the Sony Representative within 90 days of the date of sale, the Sony Representative may have other warranty terms that may apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

For more information, Sony Corporation of America has assembled the Customer Information Card to supply you with product or service information.

SONY CUSTOMER INFORMATION CENTER

100 EAST 57TH STREET
714 511 SONY (7663)
100 WEST 57TH STREET

or write to:
Sony Customer Information Center

Sony Drive, Mail Drop #7111
Park Ridge, NJ 07659

SONY CORPORATION OF AMERICA

Sony Drive, Park Ridge, New Jersey 07659

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Precautions

On power sources

- Operate the unit only on 120 V AC or 3 V DC.

For AC operation, use the supplied AC power adaptor; do not use any other type.

For battery operation, use two size AA (R6) batteries.

For car battery operation, use the car battery cord recommended for this unit. Do not use any other car battery cord.

- Remove batteries when not in use to avoid damage from battery leakage.

Handling the unit

- Avoid exposure to temperature extremes, direct sunlight, dust, or mechanical shock.
- Should anything fall into the unit, immediately unplug the unit (or remove batteries) and have it checked by qualified personnel before operating it again.

Note on cassette longer than 90 minutes

Use of cassettes longer than 90 minutes is not recommended except for long continuous recording or playback.

If you have any questions or problems concerning your unit, please consult your nearest Sony dealer.

Specifications

Recording system: 2-track 1-channel monaural

Frequency response: 150-6 000 Hz (For normal tape TYPE I)

Power output (DC): 250 mW (at 10% harmonic distortion)

Input: Microphone input jack (mini) sensitivity 0.2 mV for 3 kΩ or

lower impedance microphone

Output: Earphone jack (mini) for 8-300 ohm earphone

Power requirements: 3 V DC, two size AA (R6) batteries

DC IN 3 V jack accepts:

Sony AC-77 AC power adaptor

120 V AC, 60 Hz

Sony DCC-70 car battery cord (not supplied) for use on 12 V car battery

Battery life:

Batteries	Recording Approx.
Sony batteries SUM-3 (N5)	Approx. 2
Sony alkaline batteries AM3 (N)	Approx. 6

For maximum performance, we recommend the use of alkaline batteries. Dimensions: Approx. 111.8 × 35.2 × 79.5 mm (w/h/d) (4 3/8 × 1 3/8 × 3 1/8 inches)

Inc. projecting parts and controls

Weight: Approx. 260 g (9.2 oz) incl. batteries

Accessories supplied: Carrying case (1)

Earphone microphone (1)

AC power adaptor (1)

Optional accessories

Car battery cord: DCC-70

Electric condenser microphone: ECM-F01

Foot switch: FS-10A

Monaural earphones: ME-81, ME-182

Connecting cord: RK-G64, RK-G69

Syncho-recording unit: RM-63

Your dealer may not handle some of the above listed optional accessories. Please ask the dealer for detailed information about the optional accessories available in your country.

Note: Use only the recommended AC power adaptor or car battery cord manufactured by Sony. Polarity of the plugs of other manufacturers may be different.

Polarity of the

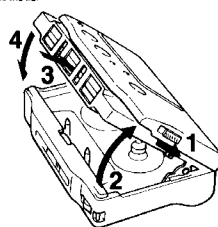
TCM 77V

Design and specifications subject to change without notice.

Installing a Cassette

Install a cassette when the unit is in the stop mode. Take up any slack of the tape with a pencil before installing a cassette.

- 1 Slide OPEN in the direction of the arrow.
- 2 Open the lid while keeping OPEN slide.
- 3 Install a cassette.
- 4 Close the lid.



When you install a cassette

The following indicators appear in the display window. The FWD indicator always appears when you open the lid.



Troubleshooting Guide

Symptoms	Possible causes and corrective action
Cassette cannot be inserted.	<ul style="list-style-type: none"> • The cassette is facing the wrong direction.
The lid does not close when a cassette is inserted.	<ul style="list-style-type: none"> • Take the cassette out of the holder and close the lid once. Reinsert the cassette into the holder.
Recording does not start.	<ul style="list-style-type: none"> • No cassette in the cassette compartment. • The cassette inserted has had the tabs removed. Cover the slot with a small piece of plastic tape. • The HOLD switch is set to HOLD.
Tape does not move.	<ul style="list-style-type: none"> • Incorrect polarity batteries. • Weak batteries. • The PAUSE button is pressed. • Battery operation is attempted while the AC power adaptor or car battery cord is connected to the recorder but not to the wall outlet or the cigarette lighter socket. • The HOLD switch is set to HOLD.
No sound from the speaker.	<ul style="list-style-type: none"> • The earphone is plugged in. • The VOL control is turned down completely.
Weak or distorted sound, sound drop-outs, or excessive noises.	<ul style="list-style-type: none"> • Weak batteries. See "Installing batteries". • Dirty heads. See "Maintenance".
No indication appears.	
Recording cannot be made or is unsatisfactory.	<ul style="list-style-type: none"> • Improper connection. See "Recording from various sound sources".

Recording

Insert a cassette and check that the unit is set to the correct mode.

Using the Flat Mic (built-in microphone)

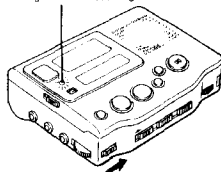
1 Check the tape transport direction.

To record on both sides of a cassette	FWD ▶	Recording starts from the upper side of the cassette
To record on one side of a cassette	◀ REV	Recording starts from the reverse side

Slide DIR in the direction of the arrow to change the tape transport direction.

2 Slide REC in the direction of the arrow. (The switch will return to its original position.)

REC/BATT indicator blinks according to the recording level while recording.



- The recording sound can be monitored with the supplied earphone.
- Built-in microphone is deactivated when the MIC jack is used.
- If you slide REC in the direction of the arrow during playback, the TCM-77V changes to the recording mode.



Display during recording

Using the supplied earphone microphone

1 Check the tape transport direction.

To record on both sides of a cassette	FWD ▶	Recording starts from the upper side of the cassette
To record on one side of a cassette	◀ REV	Recording starts from the reverse side

Slide DIR in the direction of the arrow to change the tape transport direction.

2 Connect the supplied microphone to MIC (PLUG IN POWER).

When connecting a plug-in power microphone, power is supplied to it from the TCM-77V.



Note:

- Clear sound can not be recorded if the earphone microphone plug is dirty.
- Clean the plug with dry cloth once in a while.
- Recording will not be made if you connect the earphone microphone to EAR.

3 Slide REC in the direction of the arrow. (The switch will return to its original position.)

REC/BATT indicator blinks while recording.

4 Attach to your ear and hold the telephone receiver over it.



Adjust MIC SENS according to a microphone

Adjust MIC SENS switch depending on the microphone you are using.

	MIC SENS***
Earphone microphone	M or H
Built-in microphone	L or M
External microphone (not supplied)	L or M

* L: Only for loud sound M: Normal recording H: For low sound

Recording only when sound is picked up (VOR system**)

Slide VOR to ON. The VOR indicator appears in the display window and the unit will go into the recording mode only when the microphone picks up sound.

** With the VOR (voice operated recording) system, recording starts automatically at a certain sound level, and stops when sound is no longer detected. This is useful to avoid an empty recording. The VOR indicator blinks when sound is not detected.

While the VOR system is operating

Recording will not stop when the sensitivity is too high and will not start when it is too low.

	MIC SENS***
A loud place	L or M
A quiet or open place	M or H

*** L: Start only at high sound level M: Normal H: At low sound level.

Reviewing the material just recorded

During recording, press REW/REVIEW.

When you release, playback will begin automatically from that point.

To correct a previously recorded portion during playback, simply slide REC in the direction of the arrow. The recorder will immediately change to the recording mode.

Locating the Cue Marker Position

Press CUE MARKER during recording. It blinks for a few seconds. You will hear a buzz at the cue marker position when you press FF/CUE or REW/REVIEW while playing back the tape.

It is convenient to mark at an important part of speech, for example, during an interview to quickly find that portion by pressing FF/CUE or REW/REVIEW while playing back the tape.

Notes

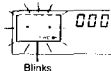
- Cue will not be marked if you press STOP or PAUSE immediately after having pressed CUE MARKER.
- You may hear noise at the cue marker position during playback when you are listening to the recording through a sensitive earphone or ear receiver.

Reading tape transport direction indicators

Display during recording or playback	Fast Forward	Reverse
Upper (FWD) side	FF/CUE button	REW/REVIEW button
Reverse (REV) side	FF/CUE button	REW/REVIEW button

The tape is wound in forward direction by pressing FF/CUE, and in the opposite direction by pressing REW/REVIEW, regardless of which side you are recording on or listening to.

If you operate REC/PLAY/STOP/FF/REW/DIR/PAUSE when a cassette is not in the unit



The cassette indicator blinks to let you know a cassette is not in the unit.

Blinks

To stop recording

STOP

To rewind the tape

Press STOP and then REW/REVIEW

To wind the tape rapidly

Press STOP and then FF/CUE

To stop recording for a moment

PAUSE

If you begin recording on the upper (FWD) side

When the tape ends, the tape direction automatically changes to the ◀ REV (reverse) mode, and recording of the reverse side begins.

At the end of the reverse (REV) side recording

The tape stops (automatic shut off), and the tape direction automatically changes to the FWD ▶ (forward) mode.

Forward side priority function

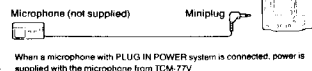
If you open the cassette holder in the stop mode, the tape direction will be automatically set to the FWD ▶ (forward) mode and recording or playback will be started from the upper (FWD) side.

Notes

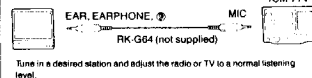
- When recording for a long time, use new batteries.
- When REC/BATT indicator goes off, the recording may not be done properly. In this case, replace the batteries with new ones.
- Do not set the earphone volume too high, otherwise a howling effect (acoustic feedback) may occur. When you take off the earphone from your ear, lower the earphone volume, otherwise a howling effect may occur.
- Do not use the microphone near a lamp cord or fluorescent lamp. It may pick up unnecessary noise.
- Dir switch does not function while recording.
- Tape SPEED CONTROL does not operate while recording.

Recording from Various Sound Sources

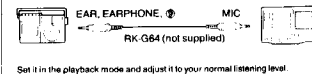
Recording with an external microphone



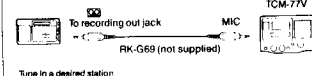
Recording from a radio or TV equipped with an earphone jack



Dubbing from another cassette-corder



Recording from a radio or TV equipped with a recording jack



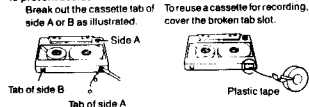
To record, slide REC of the TCM-77V in the direction of the arrow after completing the connections and preparations above.

If your radio, TV, etc., is not Sony product, refer to the instruction manual of that unit.

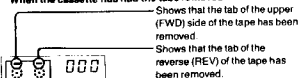
Notes

- When recording with an external microphone, adjust the MIC SENS switch depending on the recording condition.
- When recording from other sound sources, normally set the MIC SENS switch to "H".

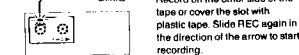
To prevent accidental erasure



When the cassette has had the tabs removed



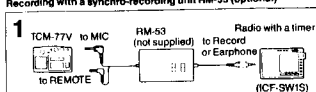
If you slide REC in the direction of the arrow when the tape has had the tabs removed, Blinks



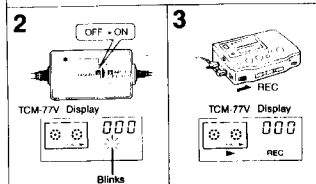
To Record or Playback at the Desired Time

Using a radio with a built-in timer

Recording with a synchro-recording unit RM-53 (optional)



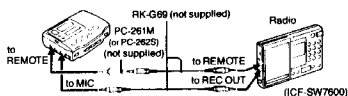
Make connections as illustrated and set the timer.



For details, refer to the instructions of the RM-53.

Recording with a radio equipped with a REMOTE jack and a built-in timer.

- Tune in the desired station.
- Set the timer. (See the instructions of the radio.)
- Connect the radio to the TCM-77V.
- Set the TCM-77V to the recording mode.

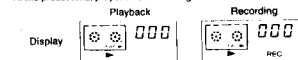


Recording or playback, using a timer

Use the supplied AC power adaptor AC-77 and any timer.

- Check that the batteries are in the TCM-77V.
- Set the timer. (See the instructions of the timer.)
- Connect the AC power adaptor AC-77 to the timer.
- Connect the AC power adaptor to the DC IN 3 V jack of the TCM-77V.
- Making sure that the indicator of the TCM-77V blinks, press PLAY or side REC in the direction of the arrow.

At the preset time, playback or recording starts.



Notes

- Check the tape transport direction before setting the timer. (See "Recording".)
- You cannot record or playback at the desired time, using the AC adaptor when batteries are not in the TCM-77V.

To release the preset time

- Press STOP of the TCM-77V.
- Disconnect the RM-53 or the AC adaptor from the TCM-77V.

Some of the accessories are not available in some areas. Consult your Sony dealer for details.

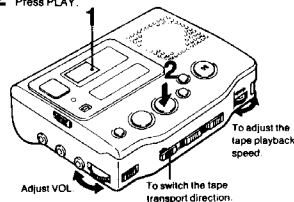
Tape Playback

Insert a cassette and check that the unit is not in the HOLD mode.

- Check the tape transport direction. If required, switch the tape transport direction by sliding DIR in the direction of the arrow.

To play back both sides of a cassette	FWD ►
To play back reverse side of a cassette	◄ REV

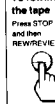
- Press PLAY.



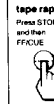
To stop playback



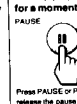
To rewind the tape



To wind the tape rapidly



To stop playback for a moment



To locate a desired position during tape playback

Keep pressing F.F. CUE or REW/REVIEW during playback. At the desired point found by listening to the high-speed sound, release the pressed button to resume playback.

If you begin playback from the upper (FWD) side

When the tape ends, the tape direction automatically changes to the ◄ REV (reverse) mode, and playback of the reverse side begins.

After the playback of the reverse (REV) side

The tape will stop (automatic shut-off) and the direction will change to the FWD ► (forward) mode.

Maintenance

Cleaning the heads

Prolonged use may contaminate the tape heads and the tape path. Contamination causes insufficient recording or sound drop-outs in playback. To enjoy optimum sound, wipe the heads, capstan and pinch roller with a cotton swab moistened with alcohol after every 10 hours of use.

Cleaning the case

Do not use alcohol, benzine or thinner to clean the case.

